

REMARKS

I. STATUS OF APPLICATION

The indication in the present Office Action, that claims 6-8 and 20-22 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, is acknowledged with appreciation. The limitations of claim 6 have been incorporated into independent claim 1 and claim 6 has been canceled. Claims 7 and 8 now depend from claim 1. The limitations of claim 20 have been incorporated into independent claim 15 and claim 20 has been canceled. Claims 21 and 22 now depend from claim 15. Accordingly, it is believed that claims 1-5, 7-19, and 21-28 are now in condition for allowance.

Claims 29-37 have been canceled in favor of new claims 38-48. Accordingly, claims 1-5, 7-19, 21-28, and 38-48 are now pending in the present Application. As discussed below, it is believed that new claims 38-48 are in condition for allowance. Accordingly, it is believed that all of the pending claims (*i.e.*, claims 1-5, 7-19, 21-28, and 38-48) are now in condition for allowance.

II. DRAWING OBJECTIONS

The Office Action indicates that the Drawings are objected to because reference characters "128b-128c" have been used to designate two different elements in Figure 1. Moreover, reference character "128d" has been used to designate two different elements in Figure 1. Accordingly, a new replacement sheet including Figure 1 is appended hereto, wherein 128b, 128c, and 128d have been changed to 130b, 130c,

and 130d, respectively. Accordingly, it is respectfully requested that the objection to the Drawings be reconsidered and withdrawn.

III. SPECIFICATION OBJECTIONS

The Office Action indicates that the Abstract is objected to because it contains the phraseology "means." A new Abstract is provided to overcome this objection. Accordingly, it is respectfully requested that the objection to the Abstract be reconsidered and withdrawn.

The Office Action further indicates that the Specification is objected to because, on page 12, line 6, the phrase "the thrust nut 142" should be --the thrust nut 142d--. Moreover, the Office Action indicates that, on page 14, lines 10-11, the phrase "the actuation controller 808" should be --the actuation controller 158--. The changes suggested by the Examiner are incorporated into the amendments to the Specification provided in this paper. Accordingly, it is respectfully requested that the objection to the Specification be reconsidered and withdrawn.

IV. 35 USC § 112 REJECTIONS

Claim 35 stands rejected under 35 USC § 112, first paragraph. Claim 35 has been canceled. Accordingly, it is respectfully requested that the rejection of claim 35 under 35 USC § 112, first paragraph, be reconsidered and withdrawn.

Claims 10-11 and 30-31 stand rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Claim 10 depends from claim 1, which

now provides antecedent basis for the limitation “the translation nut” in claim 10. Claim 11 has been amended to recite “a third drive assembly engaged with the third spur gear,” as suggested by the Examiner. Claims 30 and 31 have been canceled. Accordingly, it is respectfully requested that the rejection of claims 10-11 and 30-31 under 35 USC § 112, second paragraph, be reconsidered and withdrawn.

V. 35 USC § 102 REJECTIONS

Claims 1, 5, 15, 19, 29, 32, and 35 stand rejected under 35 USC § 102(b) as being anticipated by U.S. Patent 4,679,486 to Nelson *et al.* (“Nelson”). As noted above, the Office has indicated that claims 6 and 20 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. The limitations of claim 6 have been incorporated into independent claim 1. Claim 5 depends from claim 1. The limitations of claim 20 have been incorporated into claim 15. Claim 19 depends from claim 15. Accordingly, claims 1, 5, 15, and 19 are now in condition for allowance. Claims 29, 32, and 35 have been canceled. It is, therefore, respectfully requested that the rejection of claims 1, 5, 15, 19, 29, 32, and 35 under 35 USC § 102(b), as being anticipated by Nelson, be reconsidered and withdrawn.

Claims 1-5, 9-19, and 23-37 stand rejected under 35 USC § 102(e) as being anticipated by U.S. Patent 6,637,699 to Banks *et al.* (“Banks”). As noted above, the Office has indicated that claims 6 and 20 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. The limitations of claim 6 have been incorporated into independent claim 1. Claims 2-5 and

9-14 depend from claim 1. The limitations of claim 20 have been incorporated into claim 15. Claims 16-19 and 23-28 depend from claim 15. Accordingly, claims 1-5, 9-19, and 23-28 are now in condition for allowance. Claims 29-37 have been canceled. Therefore, it is respectfully requested that the rejection of claims 1-5, 9-19, and 23-37 under 35 USC § 102(e), as being anticipated by Banks, be reconsidered and withdrawn.

VI. PATENTABILITY OF NEW CLAIMS 38-48 OVER THE CITED REFERENCES

New, independent claims 38 and 43 each recites “a blast tube,” such that “a bearing disposed between each of the spur gears and the blast tube.” Note that independent claims 38 and 43 correspond generally in scope to claims 3 and 17, respectively, as originally filed in the present Application. The Office alleges that “the interior of the flange 220” of Banks is the claimed blast tube.¹ Applicant’s Specification teaches that “[g]enerally, blast tubes (e.g., the blast tube 812) carry combustion products resulting from ignited propellant to the motor’s nozzle (e.g., a nozzle 814).”² Banks neither discloses nor suggests that any portion of flange 220 is a blast tube, when construed in light of Applicant’s Specification. Rather, one of ordinary skill in the art at the time of the invention would appreciate that flange 220 could not serve as a blast tube, as it extends only the depth of gearbox 212, rather than from ignited propellant to a motor nozzle. The Office does not contend that Nelson teaches the claimed blast tube and Applicant agrees.

¹ Detailed Action, p. 8, II. 9 and 12.

² Specification, p. 14, II. 15-17.

Claims 39-42 depend from claim 38 and claims 44-47 depend from claim 43. Accordingly, it is believed that claims 38-47 are in condition for allowance.

New, independent claim 48 recites rotating a first gear with the first spur gear; translating a thrust nut along a first screw with the first gear; and transmitting the translation of the thrust nut to a second screw, such that the second screw and the thrust nut rotate independently, if the first drive assembly is actuated. Moreover, claim 48 recites rotating a second gear with the second spur gear; rotating a second screw with the second gear; and moving a translation nut with the second screw to actuate the control surface if the second drive assembly is actuated. Neither Nelson nor Banks discloses or suggests any of these limitations. Applicant respectfully asserts that claim 48 is commensurate in scope to apparatus claim 6, the subject matter of which is indicated in the present Office Action as being allowable. Accordingly, Applicant respectfully asserts that claim 48 is in condition for allowance.

CONCLUSION

Wherefore, in view of the foregoing remarks, this application is considered to be in condition for allowance, and an early reconsideration and issuance of a Notice of Allowance are earnestly solicited. The Examiner is invited to contact the undersigned at (817) 578-8616 with any questions, comments, or suggestions relating to the referenced patent application.

Respectfully submitted,

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Date



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DRAWING APPENDIX

Response to Office Action
Attorney Docket No. 2063.007800
Serial No. 10/797,489
Drawing Appendix

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 1. This sheet, which includes Figure 1, replaces the original sheet including Figure 1. In Figure 1, element numbers 128b, 128c, and 128d, labeling roll gears, have been changed to element numbers 130b, 130c, and 130d, respectively.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

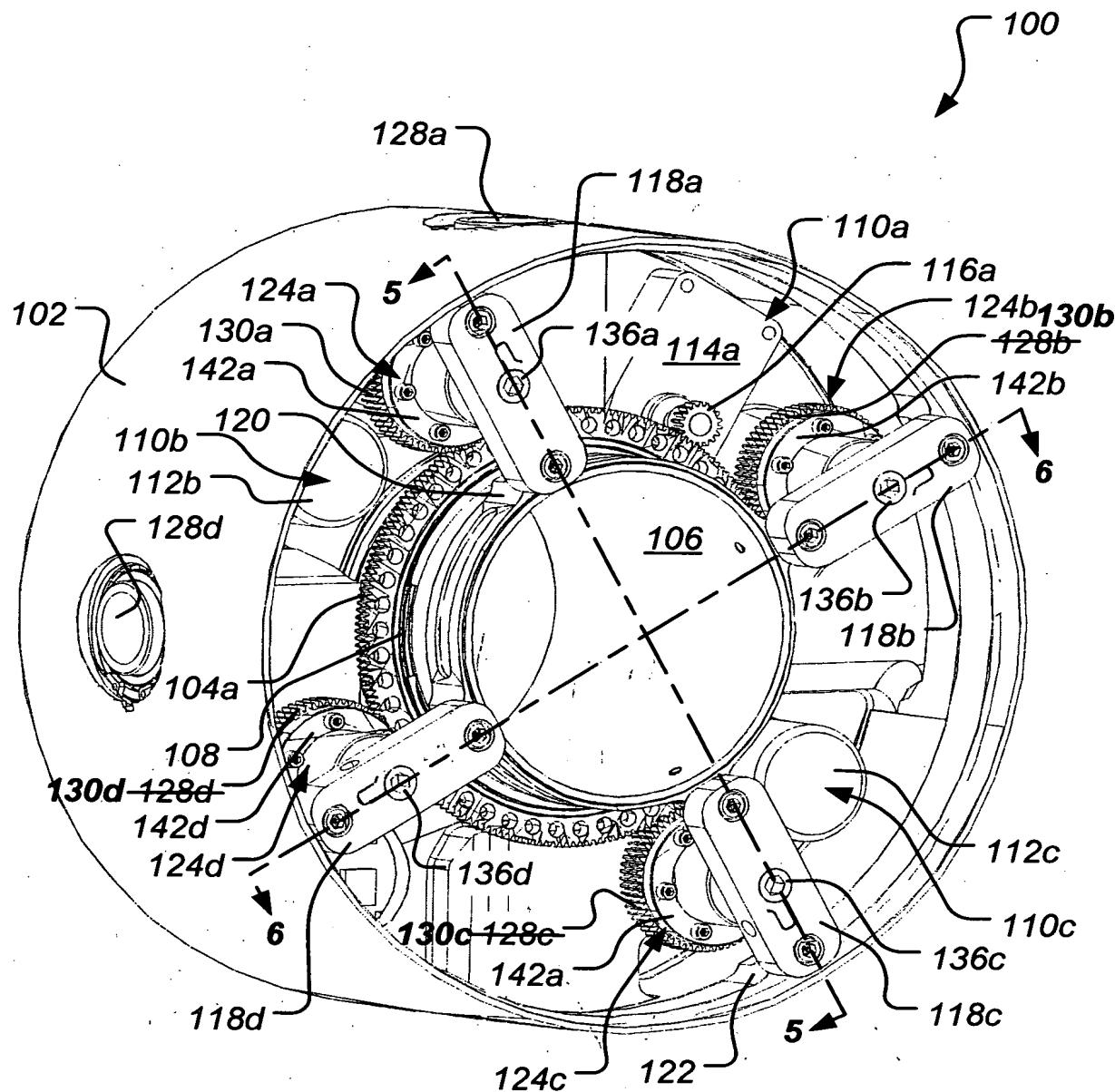


FIG. 1